

ABSTRACT

The present invention is a highly integrated computer controlled digital headend configured to process a plurality of digital video, a plurality of digital data, a plurality of voice information, and a plurality of upstream communications. The digital headend includes at least one smart network interface module operatively coupled to a shared bus, a downstream module and an upstream module. Preferably, the smart network interface module is configured to receive, transfer and buffer the plurality of digital video, the plurality of digital data, the plurality of voice information and the plurality of upstream communications. The shared bus is operatively coupled to the at least one smart network interface module. The shared bus is configured to transport the digital video, the plurality of digital data, the plurality of voice information, and the plurality of upstream communications. The downstream module is operatively coupled to the shared bus. The downstream module is configured to transmit the plurality of digital video, the plurality of digital data and the plurality of voice information. It shall be appreciated by those skilled in the art having the benefit of this disclosure that the smart network interface module may be a discrete module operatively coupled to the shared bus or the smart network interface module may be resident on the downstream module, or any combination thereof. The upstream module is operatively coupled to the shared bus and is configured to receive the plurality of upstream communications.